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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/073,573 06/08/93 BASSETT

EXAMINER

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C5M1/1118

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ART UNIT

PAPER NUMBER

4

3501

DATE MAILED:

11/18/94

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined

Responsive to communication filed on 9/1/94

This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 2 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1.  Notice of References Cited by Examiner, PTO-892. 2.  Notice re Patent Drawing, PTO-948.  
3.  Notice of Art Cited by Applicant, PTO-1449. 4.  Notice of Informal Patent Application, Form PTO-152.  
5.  Information on How to Effect Drawing Changes, PTO-1474. 6.

Part II SUMMARY OF ACTION

1.  Claims 1,2,4-24, 26 a- 27 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2.  Claims \_\_\_\_\_ have been cancelled.

3.  Claims 16-20 are allowed.

4.  Claims 1,2,4-15, 21-24, 26 a- 27 are rejected.

5.  Claims \_\_\_\_\_ are objected to.

6.  Claims \_\_\_\_\_ are subject to restriction or election requirement.

7.  This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8.  Formal drawings are required in response to this Office action.

9.  The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are  acceptable.  not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10.  The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been  approved by the examiner.  disapproved by the examiner (see explanation).

11.  The proposed drawing correction, filed on \_\_\_\_\_, has been  approved.  disapproved (see explanation).

12.  Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has  been received  not been received  been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_

13.  Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14.  Other

EXAMINER'S ACTION

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**Part III DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Informalities:**

The amendment to claim 23 has not been entered because the referenced language could not be found. Correction is recommended.

The disclosure is objected to because of the following informalities: In claims 12 and 13, "fourth" should be -- third --. Claim 14, "fifth", both occurrences, should be -- fourth -- and "sixth" should be -- fifth --. There are only a first and second means in claim 1. Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 C.F.R. § 1.75(d)(1) and M.P.E.P. § 608.01(l). Correction of the following is required: the new language of claims 6 and 8 is not in the specification. To the contrary, the language deleted is used - see page 4, lines 14-15 for example.

**35 U.S.C. 112 Objection(s)/Rejection(s):**

Claims 4, 6-11, 15, 21-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 4: calling the coulter a wheel is considered indefinite because a wheel is too broad of a term in that a coulter must, by definition, cut a slit in the earth. A wheel conventionally is to support weight which a coulter cannot do to any great degree - it sinks into the earth. It is recommended to change "wheel" in claim 4, both occurrences, to -- disk --.

In claim 6, "a second wheel" is indefinite because there is no first wheel recited.

Claim 9 is indefinite because the second and third wheel's axes are transverse to each other but they are incapable of being transverse to the axis of the first wheel. To extrapolate: in the agricultural art and especially when dealing with large earthworking units such as planters, longitudinal is considered in the direction of travel while transverse is considered at a right angle to longitudinal. It is understood that transverse can mean both "crossed" and "at right angles". Obviously, the applicant believes the first is applicable, however, the drawings show the toothed wheels axis at what appears to be right angles which would lead one to believe that this is what is meant by the applicant. For correlation with convention in this art and clarity, it is recommended in claim 9 to change "transverse both" to -- angled with respect to --. Likewise, in claim 21, line 7 transverse is interpreted as at right angles - it is recommended to change "transverse" to -- angled with respect --.

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**Prior Art Rejection(s):**

Claims 1, 2 and 12-14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Peterson et al. 4,377,979.

Peterson et al. disclose a planter comprising: a frame 13 or 64 having a front and rear end; a first means 28 on the frame for penetrating the soil to create an opening for at least one of seed and fertilizer; and second means 62 on the frame overlapping the first means in a fore and aft direction and extending rearwardly beyond the first means (see fig. 1) for stripping soil clods from the first means. The loosened bed is defined for receipt of seed or fertilizer. Furthermore, Peterson et al. disclose a first means which is a coulter. A fourth (third) means 86 is provided for defining an open slot for receipt of the seed or fertilizer. All of the wheels appear to penetrate the soil at the same depth. Fifth (fourth) means 89 is provided for closing the furrow.

Peterson et al. disclose all of the structure of claims 1, 2 and 12-14.

Claims 1, 2 and 12-14 are rejected under 35 U.S.C. § 102(b) as being anticipated by David et al. 4,550,122.

David et al. disclose a device very similar to that of Peterson et al. Just as in Peterson et al., the disc scrapers read onto the second means because they overlap the first means, extend rearwardly and strip soil clods from the first means. The

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fourth-sixth means are considered inherent in the planter to which the special opener of David et al. is connected. Almost all planters have an opener, delivery means and closer.

Claims 21-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Martin 4,785,890.

Martin discloses a planter which comprises: a frame 13; first and second cooperating toothed wheels 54; means for mounting the wheels so they rotate in vertically extending planes about transverse axes and form a V-shaped opening (inherent in device); means for supporting the frame at a predetermined height 22, 23, etc.; and means on the frame for defining a slot 32 at a first depth. The wheels penetrate the soil to a depth equal to the soil opener in fig. 8.

Martin discloses all of the structure of claims 20-23.

In the following rejection, David et al. has replaced Peterson et al. because of the changes in claims 4-6 and 8.

Claims 4-8 and 26 are rejected under 35 U.S.C. § 103 as being unpatentable over David et al. in view of Hohl 4,407,371.

David et al. does not use a rippled coulter. David et al. further discloses the first means as a first wheel 23 and the second means as a second and third wheel 38, both of which are mounted by a third means (fig. 6) to the frame about an axis that is non-parallel to a vertical plane containing the rotational

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axis of the first wheel. In other words, the axis of the second and third wheel trace a path bounded by a plane that intersects the first means. Additionally, David et al. provide means for selectively varying the height of the second wheel 34, 35 relative to the first wheel.

Hohl teaches the use of rippled coulters with a planter.

To one with ordinary skill in the art it would have been obvious to provide David et al. with a rippled coulter to assure penetration of the soil and trash.

Claim 24 is rejected under 35 U.S.C. § 103 as being unpatentable over Martin in view of Bassett et al. 5,129,282.

Bassett et al. disclose a toothed wheel pair for addition to a planter which provides height adjustability.

To one with ordinary skill in the art it would have been obvious to provide the device of Martin with height adjustability, as taught by Bassett et al., for precision furrow opening.

Claim 27 is rejected under 35 U.S.C. § 103 as being unpatentable over David et al. in view of Hohl as applied to claims 4-8 and 26 above, and further in view of Peterson et al.

David et al. does not provide vertical adjustment for the first wheel.

Peterson et al. provides vertical adjustment for more than one tool via nuts 50, 51 and standards 47, 48. One tool is a

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pair of disks 29 and the other a coulter 30. The provision of vertical adjustability is extremely old and well known in the art. Adjustability is conventionally provided in all machines and duplicated within a machine to provide different cultivating characteristics dependent on soil condition.

Therefore, to one with ordinary skill in the art it would have been obvious to provide vertical adjustment for the first wheel with respect to the second wheel in David et al., as suggested by Peterson et al., to provide different cultivating characteristics for different soil conditions.

**Remarks:**

Claims 9-11 and 15 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims.

Claims 16-20 are in condition for allowance.

Applicant's arguments filed September 1, 1994 have been fully considered but they are not deemed to be persuasive.

With regard to applicant's argument on claim 4, the examiner disagrees that there is no suggestion in Hohl. Hohl shows the use of rippled coulters to open a slot in the soil as the first tool on the planter to aid in cutting trash in no-till planting. The use of rippled coulters is extremely old and well known for this purpose. The suggestion to combine is, therefore, clear.

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With regard to claim 21: the applicant, with all due respect, is overlooking the embodiment of fig. 8 in Martin which clearly shows the toothed wheels 50 and coulter/means for defining a slot 36 at the same depth.

With respect to claims 24, 26 and 27: adjustable height is advantageous in all agricultural tools so that they can be adapted for different soil conditions. Again, this is extremely old and well known structure and is used throughout the art. The suggestion to combine is provided by Bassett for a single tool and Peterson et al. where more than one tool is provided.

With regard to claim 15 now being included in the § 112 rejection, this claim has been dependent on claim 10 throughout the prosecution and was inadvertently left out in the prior rejection. It is obvious, however, that this claim must be rejected along with claim 10 based on claim 10's dependency on claim 9. This correction here, therefore, is not considered a new rejection.

Applicant's other arguments have been considered but are not deemed persuasive.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

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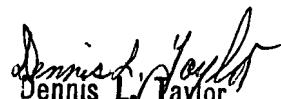
A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Spencer K. Warnick whose telephone number is (703) 308-3409. The examiner can normally be reached on Monday-Thursday from 7:30 AM-5:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randolph A. Reese, can be reached at (703) 308-2121. The fax number for this Group is (703) 308-3597 or 3598.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-2168.

SW  
November 1, 1994

  
Dennis L. Taylor  
Primary Examiner  
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